CLAIMS

1. A method of producing an air inlet in a multi-walled container, of the type consisting of an outer rigid casing (2) inside which is placed a flexible pocket (3) intended to contain a product and in association with a withdrawal member without air inlet (not shown), such a container being obtained in a mold (4) by blow-molding coextrusion of a parison (5) formed of a main outer layer made of relatively rigid plastic intended to form the casing (2) and a secondary inner layer made of relatively flexible plastic intended to form the pocket (3), said layers (2, 3) having no adhesion between them so as to delaminate without difficulty, after the creation of a sprue in a portion of the parison during the blow-molding coextrusion operation, then the removal of the sprue (6) thus formed and finally the creation of an air inlet (7) between the flexible layer (3) and the rigid layer (2) of the parison (5), characterized in that the air inlet (7) is obtained by making in the mold (4) in at least one pinch zone of the parison (5) a reservation (8) intended to obtain a protrusion (9) of said parison (5), the height of the latter being such as to allow at its end:

- a first shearing operation at the sprue (6) formed during the blow-molding coextrusion operation and having the unfortunate effect of fusing together by crushing in this zone, on the one hand, the two walls consisting of

the inner layer (3) of the parison and, on the other hand, the two walls consisting of the outer layer (2) of the same parison,

- a second operation of cutting off the protrusion (9) by means of a cutting tool (10), after the opening of the mold and reworking of the container (1) by rework templates.

2. The method as claimed in claim 1 notable by the following various steps:

- lowering the parison (5) into the mold (4),
- closing the mold (4) comprising a reservation (8) intended for the production of a protrusion (9) of the parison (5),
- a first shearing operation at the sprue (6) formed during the blow-molding coextrusion operation and having the unfortunate effect of fusing together by crushing in this zone, on the one hand, the two walls consisting of the inner layer (3) of the parison and, on the other hand, the two walls consisting of the outer layer (2) of the same parison,
- lowering the blowing iron (30) and cutting off the tip of the container (1),
- blow-molding the parison (5) and cooling the latter,
- raising the blowing iron (30) again,
- opening the mold (4),

- reworking the container (1) by rework templates,
- a second operation of cutting off the protrusion (9) by means of a cutting tool (10).

3. The method as claimed in one of claims 1 and 2, characterized in that the first shearing operation at the sprue (6) is carried out by knives (8) integrated into the mold (4).

4. The method as claimed in one of claims 1 to 3, characterized in that the second operation of cutting off the protrusion (9) is carried out by an automated or automatable cutting tool consisting of a pincer (10).

5. The method as claimed in one of claims 1 to 4, characterized in that the protrusion (9) is made in the bottom portion of the container.

6. The method as claimed in one of claims 1 to 5, characterized in that the protrusion (9) is made at the top portion of the container in the zone of a tip.

7. The method as claimed in one of the preceding claims, characterized in that in order to improve the delamination, more particularly in the zone of the protrusion (9) being crushed when the sprue (6) is created, agents are added to

one and/or other constituent material of the container in order to make it easier to separate the two layers (2, 3) formed by the inner flexible wall and the outer rigid wall or in order to prevent them fusing together when they are crushed.

8. The method as claimed in claim 7, characterized in that the agents used to improve the non-fusion at the protrusion (9) are dispersant and slippery lubricating agents such as erucamide, silicone and stearate compounds.

9. The method as claimed in one of claims 1 to 8, characterized in that the outer layer (2) forming the rigid casing and the inner layer (3) forming the flexible pocket are made respectively of polypropylene and polyethylene that do not stick together.

10. The method as claimed in one of claims 1 to 9, characterized in that the outer layer (2) of the parison (5) represents 80% ± 10% of the total thickness of the parison (5) and the inner layer (3) 20% ± 10%, so as to make the first rigid and the second collapsible relative to the latter.

11. The method as claimed in one of claims 1 to 10, characterized in that the mold (4) consisting of two half-

shells (4A, 4B) comprises, in its parting line, longitudinal extensions (11) made over a predetermined height, so as to allow the flexible inner layer (3) to be pinched in the rigid outer layer (2), preventing the first from delaminating from the second in this zone and thus to force, during the use of the container (1), a delamination of the flexible pocket (3) from the rigid casing (2) in a direction perpendicular to said parting line.

12. The method as claimed in one of claims 1 to 11, characterized in that the withdrawal member consists of a pump without air inlet (not shown) comprising a plunger tube extending it inside the pocket (3) and of a length such that the withdrawal of product is not hampered by the collapsing of said pocket (3), thus allowing a maximum delivery of the contained product.

13. The method as claimed in one of claims 1 to 12, characterized in that the bottom of the mold (4) has a shape optimized so as to assist with the delamination between the rigid layer (2) and the flexible layer (3) when the air inlet (7) is created.

14. The method as claimed in claim 13, characterized in that the bottom of the mold (4) is dished outward and comprises at least two diametrically opposed appendages intended to form

support studs (13) of the container (1) in order to provide stability for the latter, despite its dished bottom.

15. The method as claimed in one of claims 1 to 14, characterized in that each layer of the parison (5), rigid and/or flexible, consists of several strata forming subassemblies, each of the latter being able to be delaminated from the other.

16. The method as claimed in one of claims 1 to 15, characterized in that the constituent material of the outer rigid casing is made porous by means of fillers or additives added to the material, in order to improve the continued delamination on the walls of the container by allowing the outside air to penetrate more easily between its two constituent layers.

17. A container with a variable inner volume obtained by using the method of claims 1 to 16.